

REMARKS

Reconsideration of the present application is respectfully requested.

Notice of Non-compliant Amendment

Applicants thank the Examiner for pointing out in her Office communication dated May 2, 2006 informalities found in Applicants' Response dated February 8, 2006. Applicants have corrected the Response accordingly.

Status of the Application

Claims 1-12 are currently amended for purely formal matters. Support for the claim amendments is found in the corresponding original claims as filed. Claims 1-12 remain pending. No new matter is added by way of this amendment.

Claim Rejections under 35 U.S.C. § 103

Claims 1-12 stand rejected as obvious under 35 U.S.C. § 103(a) over U.S. Patent No. 6,843,919 (to Klabunde et al.). According to the Examiner, Klabunde allegedly teaches a process for making controlled oxide nanoparticles from fungi with metal salts under conditions where temperatures are within the range of 15 °C to 50 °C. The Examiner incorrectly argues that it would have been obvious to one skilled in the art, based on Klabunde, to select a fungus as the target source and to vary temperature ranges to arrive at the claimed invention. Applicants traverse the rejection and respectfully request reconsideration.

Applicants respectfully submit that Klabunde teaches the use of carbon-coated metal oxide nanoparticles in the destruction of chemical and biological agents such as toxins and bacteria. According to Klabunde, nanoparticles are synthesized by either the decomposition of metal alkoxide at temperatures of at least 500 °C or by drying carbon-rich aerogels under supercritical conditions to form a composite (see col. 2, lines 30-53). Therefore, Klabunde is directed to an entirely different process of manufacturing nanoparticles, one that does not and cannot involve the features recited in the claims.

The Examiner has attempted to analogize the present invention to the use of the nanoparticles in Klabunde by incorrectly asserting that Klabunde teaches fungi at column 4, line 20. However, when read in context, Klabunde actually discloses the use of readily made carbon

coated nanoparticles by contacting the nanoparticles with target substances, including fungi, to absorb biocides from the target substance. One skilled would not, based on this teaching, have any motivation to use fungus as a target substance.

Additionally, the Examiner alleges that the process for nanoparticles is carried out under conditions where temperatures are within the range of 15 °C to 50 °C (see col. 4, line 36. The Examiner has erroneously cited column 5 in the Office Action). Again, the Examiner has misinterpreted the reference. Klabunde teaches that the carbon coated nanoparticles may be used to absorb biocides at the noted temperature range. This teaching has no relation to any actual synthesis of nanoparticles.

Lastly, the Examiner has incorrectly cited column 6, Example 2, in support of an alleged teaching of metal salt solutions as the same as the claimed invention. In fact, Example 2 teaches the use of various solvents at supercritical conditions to manufacture nanocrystals in an entirely different process as compared to the claimed invention.

The Examiner states that one skilled in the art would have known to select for varied ambient temperatures and to select heavy metal salts. However, applicants submit that mere awareness in the art is not sufficient to establish obviousness. *See In re Zurko*, 258 F.3d 1379, 59 USPQ2d 1693 (Fed. Cir. 2001) (Deficiencies of references cannot be saved by appeals to “common sense” and basic knowledge” without any evidentiary support); *see also Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 103 F.3d 1538, 41 USPQ2d 1238 (Fed. Cir. 1997) *cert denied*, 521 U.S. 1122, 1244 (1997) (“A determination of obviousness must involve more than indiscriminately combining prior art; a motivation or suggestion to combine must exist.”). Rather, obviousness can only be established where there is some teaching, suggestion or motivation in the prior art that would have led a person of ordinary skill to modify the references. *See In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995); *see also In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Accordingly, applicant submits that Klabunde fails to teach or provide motivation to manufacture a nanoparticle using fungus as a source material in a metal salt solution to create a biomass with subsequent filtering. One skilled in the art would not be able to arrive at the claimed invention based on the teaching in Klabunde. Therefore, Applicants submit that the

claimed invention is not obvious over the prior art and respectfully request that the rejection be withdrawn.

CONCLUSION

In view of the above amendments and remarks, the claims now presented are believed to be in condition for allowance and such action is earnestly solicited. If there are any other issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

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